REMARKS

Applicant appreciates the Examiner's phone interview granted on November 28, 2005. During this Examiner's interview, independent Claim 1 was discussed in reference to the cited prior art, U.S. Patent 6,333,720 B1 to Gottl et al and U.S. Patent 6,243,050 B1 to Powell.

The Examiner correctly notes that Gottl '720 teaches a dual-polarized multiband antenna. The Examiner also correctly notes that this dual-polarized multiband antenna produces two beams each having horizontal half beamwidths of about 60 degrees to be produced at the same time, as supported in this patent in Column 4 lines 7-9.

The Examiner indicated, consistent with the Examiner's Final Rejection, that while Gottl fails to teach a dual-polarized multiband antenna wherein each of the two (2) beams have a 90 degree azimuth beamwidth, Powell teaches a single dipole antenna element providing a single beam having a horizontal beamwidth of about 65 degrees. Further, as discussed in Column 4 lines 7-20, it is noted that this single dipole strip structure may be designed to provide a single beam having a 90 degree azimuth beamwidth, and Applicant recognizes same. However, the Examiner's suggestion that two such 90 degree azimuth beamwidth dipole strip structures could be configured as a dual-polarized multiband antenna according to the teachings of Gottl '720 is unsupported by the teachings of these two references, and further, such a combination would create a poor performing dual-polarized multiband antenna.

Specifically, it is well known to one skilled in the art of antenna design that the dipole elements of a dual-polarized multiband antenna have a significant effect on the characteristics of the radiation generation by each dipole element. As discussed in detail in Applicant's response of October 18, 2005, cross coupling and isolation problems would prevent each of the dipole elements according to the teachings of Gottl and Powell from having any where near a 90 degree beamwidth if configured as a multiband antenna. Due to the interacting complexities of dual-polarized multiband antennas, each of the beams generated by a Powell dipole element would each have only about a 45 degree azimuth beamwidth due to isolation and cross coupling problems, which is even poorer than the Gottl design. The Powell dipole elements are unsuitable

for use in dual-polarized multiband antennas. Dual polarized multiband antennas typically include, but not exclusively, slant 45 type dipole structures to address these isolation and cross coupling issues, as shown in Gottl. However, the Powell dipole element is not suited for use as a slant 45 type dipole structure, and the combination of Gottl and Powell is unrealistic. They are different type structures, and Powell is not directed to a dual-polarized multiband antenna.

Applicant's invention, as claimed in Claim 1, achieves technical advantages and solves the long felt need of providing a dual-polarized multiband antenna wherein each of two beams has a 90 degree azimuth beamwidth. Gottl '720 is a good example of the conventional dual-polarized multiband antennas wherein each beamwidth is limited to only about 60-65 degrees. Single dipole antennas, such as taught by Powell '050, have long been known to provide a single beam having a 90 degree azimuth beamwidth. However, this is not a technical feat for a single dipole antenna generating a single band frequency. Accordingly, one skilled in the art truly recognizes the feat of Applicant's invention, namely, providing a dual-polarized multiband antenna generating two frequency beams, each beam having a 90 degree azimuth beamwidth.

During the Examiner's phone interview, the Examiner argued to Applicant that independent Claim 1 fails to provide "adequate structure" providing this first beam and second beam each having a 90 degree azimuth beamwidth. Applicant directs the Examiner to the last portion of the claim, specifically reciting "wherein the dipole elements are further adapted to provide the first beam and second beam having a 90 degree azimuth beamwidth". The Examiner indicated that the language "adapted to" is not acceptable claim language to positively claim structure of the recited dipole elements providing this feature. Applicant respectfully disagrees, and refers the Examiner to MPEP § 2173.05 (g), where it is recited at the end portion thereof that "the Court held that limitations such as "members adapted to be positioned" and "portions.... being resiliently dilatable whereby said housing may be slideably positioned" serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *In re Venezia,* 530 F.2d 956, 189 USPQ 149 (CCPA 1976)." Hence, it is clear that "adapted to" language does precisely define structural attributes of interrelated component parts, as is the case for the dipole elements in independent Claim 1. On page 959, further commenting on one of the claims under review, the Court said "For example, paragraph two of claim 31 calls for "a pair of

sleeves..... each sleeve of said pair *adapted to be fitted* over the insulating jacket of one of the cables." Rather than being a mere direction of activities to take place in the future, this language imparts a structural limitation to the sleeve". (with emphasis).

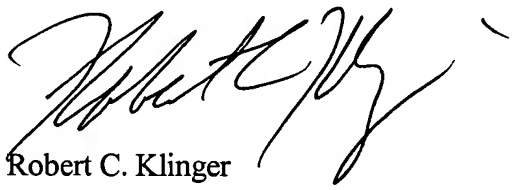
Hence, it is well settled that "adapted to" claim language does impart a structural limitation on the claimed dipole elements. Accordingly, Claim 1 defines over the cited prior art in the present application.

With regards to dependent Claim 21, there is specifically recited that the claimed multiband antenna include a first and second arm extending at 45° with respect to each other, such as a slant 45 type antenna. This dependent claim is also allowable over the prior art for the forgoing reasons.

Applicant respectfully requests the Examiner to withdraw the Final Rejection, and pass this application on to issuance. If the Examiner has any further issues, the Examiner is encouraged to contact the undersigned to resolve these matters by phone where possible.

No additional fees are believed due, however, should any other fees be due the Examiner is authorized to debit the deposit account 50-1752.

Respectfully Submitted,



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